

Application No. 09/854,474
Response dated December 23, 2003
Reply to Office Action of October 1, 2003

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (withdrawn): A primer composition comprising the following (A), (B), (C) and (D) components:

- (A) a saturated hydrocarbon polymer having at least one alkenyl group per molecule,
- (B) a silane coupling agent,
- (C) a polyvalent alkoxy silane and/or a condensation product thereof, and
- (D) an organoaluminum compound and/or an organotitanium compound.

Claim 2 (withdrawn): The primer composition according to Claim 1 wherein the (A) component saturated hydrocarbon polymer is a polyisobutylene polymer having a number average molecular weight in the range of 500 to 50000 and containing at least one alkenyl group terminally of its backbone and/or side chain.

Claim 3 (withdrawn): The primer composition according to Claim 1 or 2

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wherein the (B) component silane coupling agent has at least one functional group selected from the group consisting of epoxy, vinyl and (meth)acryloyl groups.

Claim 4 (withdrawn): The primer composition according to Claim 1 or 2 comprising a hydrosilylation catalyst as (F) component.

Claim 5 (withdrawn): The primer composition according to Claim 1 or 2 comprising an organic solvent as (G) component.

Claim 6 (withdrawn): A primer composition comprising the following (B), (C), (D) and (E) components:

(B) a silane coupling agent,

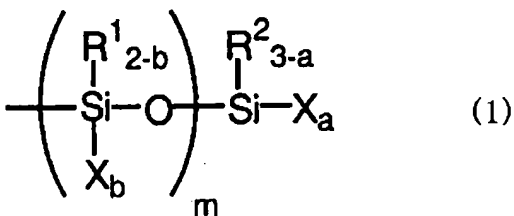
(C) a polyvalent alkoxysilane and/or a condensation product thereof,

(D) an organoaluminum compound and/or an organotitanium compound, and

(E) a vinyl copolymer having a backbone structure substantially comprised of a vinyl copolymer chain and containing a silicon-containing group having a hydroxyl or hydrolyzable group bound to a silicon atom and capable of crosslinking by siloxane bonding terminally of its backbone chain and/or in its side chain.

Claim 7 (withdrawn): The primer composition according to Claim 6

wherein the (E) component vinyl copolymer has a number average molecular weight in the range of 500 to 50000 and contains a hydrolyzable silyl group of the general formula (1) terminally of its backbone and/or side chain:



wherein R¹ and R² each independently represents an alkyl group of 1 to 20 carbon atoms, an aryl group of 6 to 20 carbon atoms, an aralkyl group of 7 to 20 carbon atoms, or a triorganosiloxy group of the formula (R')₃SiO-, where R' groups each independently represents a substituted or unsubstituted hydrocarbon group containing 1 to 20 carbon atoms; X groups each independently represents a hydroxyl group or a hydrolyzable group; a denotes 0, 1, 2 or 3; b denotes 0, 1 or 2; but both a and b are not equal to 0; m denotes an integer of 0 to 19.

Claim 8 (withdrawn): The primer composition according to Claim 6 or 7

comprising a saturated hydrocarbon polymer containing at least one alkenyl group per molecule as (A) component.

Claim 9 (withdrawn): The primer composition according to Claim 8

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wherein the (A) component saturated hydrocarbon polymer is a polyisobutylene polymer having a number average molecular weight in the range of 500 to 50000 and containing at least one alkenyl group terminally of its backbone and/or side chain.

Claim 10 (withdrawn): The primer composition according to Claim 6 or 7

wherein the (B) component silane coupling agent has at least one functional group selected from the group consisting of epoxy, vinyl and (meth)acryloyl groups.

Claim 11(withdrawn): The primer composition according to Claims 6 or 7

comprising a hydrosilylation catalyst as (F) component.

Claim 12 (withdrawn): The primer composition according to Claims 6 or 7

comprising an organic solvent as (G) component.

Claim 13 (canceled)

Claim 14 (canceled)

Claim 15 (canceled)

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Claim 16 (canceled)

Claim 17 (canceled)

Claim 18 (canceled)

Claim 19 (canceled)

Claim 20 (canceled)

Claim 21 (canceled)

Claim 22 (canceled)

Claim 23 (withdrawn): A bonding method for bonding a cured product to a substrate which comprises coating a primer composition comprising a polyvalent alkoxysilane and/or a condensation product thereof as (C) component and an organoaluminum compound and/or an organotitanium compound as (D) component on a substrate and applying a curable composition comprising a saturated hydrocarbon polymer having at least one alkenyl group per molecule onto the primed substrate.

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Claim 24 (withdrawn): The bonding method according to Claim 23

wherein said saturated hydrocarbon polymer having at least one alkenyl group per molecule is a polyisobutylene polymer having at least one alkenyl group terminally of its backbone and/or side chain.

Claim 25 (withdrawn): The bonding method according to Claim 23 or 24

wherein said curable composition comprises two or more silicon-bound hydrogen atoms per molecule.

Claim 26 (withdrawn): The bonding method according to Claim 25

wherein said curing agent is a polyorganohydrogen polysiloxane containing two or more hydrosilyl groups per molecule.

Claim 27 (withdrawn): The bonding method according to Claim 23 or 24

wherein said primer composition comprises a hydrosilylation catalyst as (F) component.

Claim 28 (withdrawn): The bonding method according to Claim 23 or 24

wherein said primer composition comprises an organic solvent as (G) component.

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Claim 29 (withdrawn): A laminate as obtainable by the bonding method according to Claim 23 or 24.

Claim 30 (new): A bonding method for bonding a cured product to a substrate

which comprises coating a primer composition comprising a silane coupling agent on a substrate,

applying a curable composition comprising a hydrocarbon polymer having at least one alkenyl group per molecule onto the primed substrate, and

curing the curable composition to obtain the cured product bonded to the substrate,

wherein the silane coupling agent has at least one functional group selected from the group consisting of epoxy, methacryl, acryl, isocyanate, isocyanurate, vinyl and carbamate groups, and

wherein said hydrocarbon polymer having at least one alkenyl group per molecule is a polyisobutylene polymer having at least one alkenyl group terminally of its backbone and /or side chain.

Claim 31 (new): A bonding method for bonding a cured product to a substrate

which comprises coating a primer composition comprising a silane coupling agent on a substrate,

applying a curable composition comprising a hydrocarbon polymer having at least one

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alkenyl group per molecule onto the primed substrate, and

curing the curable composition to obtain the cured product bonded to the substrate,

wherein the silane coupling agent has at least one functional group selected from the group consisting of epoxy, methacryl, acryl, isocyanate, isocyanurate, vinyl and carbamate groups, and

wherein said curable composition further comprises a curing agent containing two or more silicon-bound hydrogen atoms per molecule.

Claim 32 (new): A bonding method for bonding a cured product to a substrate

which comprises coating a primer composition comprising a silane coupling agent on a substrate,

applying a curable composition comprising a hydrocarbon polymer having at least one alkenyl group per molecule onto the primed substrate, and

curing the curable composition to obtain the cured product bonded to the substrate,

wherein the silane coupling agent has at least one functional group selected from the group consisting of epoxy, methacryl, acryl, isocyanate, isocyanurate, vinyl and carbamate groups, and

wherein said primer composition further comprises an organoaluminum compound and/or an organotitanium compound.

Claim 33 (new): The bonding method according to claim 31, wherein said curing agent is a polyorganohydrogen polysiloxane containing two or more hydrosilyl groups per molecule.

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Claim 34 (new): The bonding method according to claim 30, 31, 32 or 33, wherein the silane coupling agent has at least one functional group selected from the group consisting of epoxy, vinyl and (meth)acryloyl groups.

Claim 35 (new): The bonding method according to claim 30, 31, 32 or 33, wherein said primer composition comprises a polyvalent alkoxysilane and/or a condensation product thereof.

Claim 36 (new): The bonding method according to claim 30, 31, 32 or 33, wherein said primer composition comprises a hydrosilylation catalyst.

Claim 37 (new): The bonding method according to claim 30, 31, 32 or 33 wherein said primer composition comprises an organic solvent.

Claim 38(new): A laminate obtained by the bonding method according to claim 30, 31, 32 or 33.